

ABSTRACT OF THE DISCLOSURE

A metrology apparatus includes an actuator with a first actuator stage to controllably move in first and second orthogonal directions, and a second actuator stage adjacent to the first actuator stage to controllably move in a third direction orthogonal to the first and second orthogonal directions. A coupling is coupled to the second actuator stage and to a multi-bar linkage assembly fixed to a second end of a reference structure. The linkage supports a sample holder and transmits appropriate displacements generated by the actuator thereof. The second actuator stage and the coupling move the linkage in the third orthogonal direction in a manner that substantially isolates the linkage from any second actuator stage motion in the first and second directions. An objective is fixed to the reference structure and is located between a light source and a position sensor. The position sensor measures first actuator stage motion in the first and second directions.

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